

## A Comprehensive Approach to E-commerce Platforms Targeted at Local Producers and Communities

**Marek Mędrek**

Maria Curie-Skłodowska University, Poland  
marek.medrek@umcs.pl

---

### Abstract

*Background: In this paper we analyse the logistics strategies in the e-commerce platforms oriented to local producers and communities in order to present an optimal framework for supporting managers and traders in managing logistics processes on e-commerce platforms.*

*The online retail sector is the one of the main drivers of growth in the world retail sector and e-commerce growth rates exceed 10% every year. Also for local producers, which are dispersed in a large area, the direct contact with customers offered by the Internet becomes attractive, and many smallholders start selling products directly to consumers using online services. However, because of their small scale the unit transaction costs are high and distortions of input and output markets often make it very difficult to take advantage of on-line market opportunities.*

*Such a combination of technological and organizational conditions requires a specific approach that takes into account the limitations of local producers and emphasizes their strengths. It is extremely important also in logistics, which is the key factor in the online channel.*

*Methods: To help smallholders and providers of e-commerce platforms address the inefficiencies and barriers to market access, we present quantitative analysis of logistics processes commonly used in marketplace platforms. We use process modelling and simulation techniques such as BPMN 2.0 (Business Process Model and Notation) and BPMS (Business Process Modelling System) to assess the strengths and limitations of selected logistics scenarios.*

*Results: We developed and evaluate the models of logistic processes used in local producers oriented marketplace platforms. As a result, we propose the logistics framework which can support smallholders to identify the main factors that are important for preserving the values coming from local characteristics connected to places and local connections and optimizing the operating costs.*

*Conclusions: Our approach combines typical marketplace functionalities and introduces a number of changes, especially in adjusting the delivery process and combining the offer of local producers with the offer of local communities.*

**Keywords:** marketplace, Omni channel, locality, logistics, e-commerce, process modelling